

February, 2006

OLIVER LINTON

MAILING ADDRESS: Department of Economics
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CITIZENSHIP: British

PRESENT POSITION: Professor of Econometrics
Department of Economics
The London School of Economics and Political Science
July 1999-,
Member, Financial Markets Group, 2001-

FELLOWSHIPS AND CONSULTING:

Fellow, Centre for Microdata Methods And Practice, 2001- 2004
Research Associate, IAM Research Program, 2002- 2005
Econometric Advisor, Hargreaves Lansdown, 2002-
Econometric Advisor, Royal and Sun Alliance 2004-
Econometric Advisor, Concordia 2004-
Consultant on T.W. Guinnane's National Institute of Health
"Irish fertility at the turn of the Twentieth Century"

PREVIOUS POSITIONS: Professor

Department of Economics and Department of Statistics
and Fellow, International Center for Finance
Yale University, July 1998–June 2000

Associate Professor
Department of Economics
Yale University, July 1997–June 1998

Assistant Professor
Department of Economics
Yale University, July 1993–June 1997

Research Fellow
Nuffield College, Oxford University, September 1991– June 1993

RESEARCH SUPPORT

ESRC RES-051-27-0110 Research Professorship: 2004-2007
 ESRC R00023952: “Advances in Semiparametric and Nonparametric Research” (2001-2004) [with X. Chen and P.M. Robinson]
 NSF SBR-9730282: “Asymptotic Approximations in Semiparametric and separable Nonparametric Models” (1998-2000)
 NSF SBR-9423102: “Asymptotic Approximations in Parametric and Semiparametric Models” (1995-1997)
 NATO – 950150: “Generalized Additive Modelling with Applications” (1995-1997) [with W. Haerdle]
 DSSRC: “Nonparametric methods in Finance and Insurance” (1999-2002) [with C. Tanggaard and J. Nielsen]

GRADUATE STUDENTS SUPERVISED

Douglas Hodgson (Joint with P.C.B. Phillips): “Adaptive estimation in cointegrated systems” (1995, Rochester)
 Zhejie Xiao (Joint with P.C.B. Phillips): “Efficiency issues in stationary and nonstationary time series” (1997, Illinois, Urbana-Champaign)
 Woocheol Kim (Joint with P.C.B. Phillips): “Nonparametric Analyses of Evolutionary Time Series and Nonlinear Additive ARCH Models” (1999, Humboldt University, Berlin)
 Moto Shintani (Joint with P.C.B. Phillips) “Nonparametric Econometrics for Nonstationary and Chaotic Data” (2000, Vanderbilt)
 Thong Nguyen (Joint with A. Jeffrey and P.C.B. Phillips) “Essays on the Term Structure of Interest Rates” (2000, Hong Kong UST)
 Dennis Kristensen “Estimation in two classes of Semiparametric Diffusion Models” (2004, Wisconsin, Madison)
 David Jacho-Chavez “Identification, Estimation, and Efficiency in Some Semiparametric Econometric Models” (2006, Indiana, Bloomington)
 Christian Huse, Cedric Zuninho, Mohammed Fawaz, Anisha Ghosh, Ilze Kalnina, Sorawoot Srisuma, Michal Pozarzycki

OTHER THESIS COMMITTEES

Yoosoon Chang, John Chao, Bin Bin Guo, Chang Sik Kim, Guido Kuersteiner, Chin-Chin Lee, John McDermott, Alex Maynard, Juan Mora, Hyungsik Moon, Benoit Perron, Michael Sabbatini, Marcia Schafgans, Frank Schorfheide, Katsumi Shimotsu, Joaquin Ramalho, Elena Martinez-Sanchez

PROFESSIONAL SERVICE

Co-Editor, *Econometric Theory*, 2000-
 Associate Editor, *Econometrica* , 2003-2006
 Associate Editor, *Journal of the American Statistical Association Case Studies and Applications*, 2004-2007
 Associate Editor, *Journal of Econometrics*, 1998-

Co-Editor, *Special Issue of Journal of Econometrics*, 2004
 Editorial Board, *Review of Economic Studies*, 1999-
 Associate Editor, *Journal of Statistical Planning and Inference*, 2001
 Associate Editor, *Econometric Theory*, 1996-1999
 Programme Committee, *ES European Meetings*: Lausanne, 2001, Stockholm 2003,
 Madrid 2004, World Congress London 2005
 External Examiner of Undergraduate Econometrics, University College London, 2002-2004
 Academic Planning and Resources Committee, LSE, 2001-2004
 International Advisory Board, SRM University Group, Chennai, India, 2004-
 Panel of Advisors, Commonwealth Scholarship Commission, 2004-
 Referee for other journals: *Econometrica*, *Biometrika*, *The Annals of Statistics*, *Journal of Econometrics*, *Journal of the Royal Statistical Society Series B*, *Journal of the American Statistical Association*, *Journal of Business and Economic Statistics*, *Journal of Applied Econometrics*, *Review of Economics and Statistics*, *Review of Financial Studies*, *Oxford Economic Papers*, *Journal of Mathematical Finance*, *Journal of Development Economics*, *Italian Journal of Statistics*, *Annals of the Institute of Statistical Mathematics*, *International Journal of Forecasting*, *Journal of Quantitative Economics*, *Econometric Reviews*, *Journal of Computational and Graphical Statistics*, *Statistics and Computing*, *Journal of Population Economics*, *European Journal of Finance*, *Economic and Social Science Research Council*, *National Science Foundation*, *TEST*, *Journal of Statistical Planning and Inference*, *Journal of Statistical Computation and Simulation*, *Statistica Sinica*, *Statistics and Probability Letters*, *Journal of Multivariate Analysis*, *Bernoulli*, *Scandinavian Journal of Statistics*, *Metrika*, *Journal of Applied Economics*, *Journal of Empirical Finance*, *Food Policy*, Springer, Cambridge University Press, *Tourist Management*, *Empirical Economics*, *Journal of Human Resources*

EDUCATION

PhD in Economics, UC Berkeley, 1991
 MSc in Econometrics and Mathematical Economics, LSE, 1986
 BSc (1st Class) in Mathematics, LSE, 1983

HONORS AND PRIZES

Elected Member, International Statistical Institute (2006)
 Plura Scripsit, *Econometric Theory* (2002)
 Multa Scripsit, *Econometric Theory* (1998)
 MA, Yale University (1998)
 Junior Faculty Fellow, Yale University (1996/97)
 MA, Oxford University (1993)
 Regents Fellowship, UC Berkeley, 1986
 Undergraduate Prize, LSE, 1983
 Mathematics Prize, LSE, 1982

PhD THESIS

“Edgeworth Approximation in Semiparametric Regression Models,” UC Berkeley, July 1991.
 PhD Advisor: Professor T. J. Rothenberg

INVITED CONFERENCE TALKS AND LECTURES

CASE Lectures, Berlin, January 2007
 Time Series Econometrics, Finance and Risk, Perth, WA, June 2006
 Far Eastern Econometric Society, Beijing, July 2006
 Centre for Analytical Finance, Sonderborg, Denmark, June, 2006
 Invited Discussant, World Congress of the Econometric Society, London, August 2005
 ISI Sydney, April 2005
 Canadian Study Group, Toronto, September 2004
 Semiparametrics in Rio, Rio de Janeiro, July 2004
 Karlsruhe Stochastik Tage, Karlsruhe, March 2004
 International Conference, Waseda University, Tokyo, January 2004
 International Conference, SRM University, Chennai, India, January 2004
 European Econometric Society Meetings, Stockholm, September 2003
 ISI meetings, Berlin, August 2003
 Far Eastern Econometric Society Meetings, Seoul, July 2004
 Latin American Econometric Society Meetings, Sao Paolo, July 2002
 Common Features in Rio, July 2002
 Lausanne, FAME/HEC lectures July 2002
 Advances and Trends in Nonparametric Statistics Crete, July 2002
 Monte Verita, Ascona, April 2002
 Rome, Tor Vergata, April 2002
 Oberwolfach, September 2000
 Interface, Chicago, June 1999
 Australian Econometric Society, July 1998
 Benjamin Meeker Visiting Speaker, Bristol, U.K., May 1996

CONFERENCE ORGANIZATION

Conference in Honour of P.M. Robinson, London, May, 2007
 Oberwolfach conference on Nonparametric and Semiparametric Methods, March, 2007
 CEMMAP conference on Testing Stochastic Dominance Restrictions, November, 2005
 Econometric Study Group conference on Inverse Problems, November 2003
 Semiparametrics in Rio, July 2004
 Programme Co-Chair, Econometric Society European Meetings, Vienna 2006

PUBLICATIONS

Forthcoming

- [1] Discussion of Koenker and Xiao (with C. Hafner) *Journal of the American Statistical Association*
- [2] Discussion of Ait-Sahalia and Shephard (with I. Kalnina) *World Congress*
- [3] Semi- and Nonparametric ARCH/GARCH-Modeling. *Handbook of Financial Time Series*

- [4] ARCH Models *The New Palgrave Dictionary of Economics, 2nd Edition*
- [5] Local Regression Models *The New Palgrave Dictionary of Economics, 2nd Edition*
- 2006
- [1] Flexible Term Structure Estimation: Which Method is Preferred? (with A. Jeffrey and T. Nguyen) *Metrika* January, 1-24.
- [2] The Froot-Stein Model Revisited (with N. Hogg and J.P. Nielsen) *The Annals of Actuarial Science*
- [3] The Common and Specific Components of Dynamic Volatility (with G. Connor and R. Korajczyk). *Journal of Econometrics*
- [4] A Closed-form Estimator for the GARCH(1,1)-Model (with D. Kristensen) *Econometric Theory*
- 2005
- [1] Estimating Semiparametric ARCH Models by Kernel Smoothing Methods (with E. Mammen) *Econometrica* 73, 771-836.
- [2] Testing for Stochastic Dominance under general conditions: A subsampling approach (with Y. Whang and E. Maasoumi) *Review of Economic Studies* 72, 735-765.
- [3] Nonparametric Inference for Unbalanced Time Series Data *Econometric Theory, 20th Anniversary Special Issue* 21, 143-157.
- [4] Asymptotic expansions for some semiparametric program evaluation estimators (with H. Ichimura) *Cambridge University Press, Volume in Honour of Tom Rothenberg, Eds. D.W.K. Andrews and J. Stock.*
- 2004
- [1] Nonparametric Neural Networks estimation of Lyapunov Exponents (with M. Shintani). *Journal of Econometrics* 120, 1-34.
- [2] Non-Parametric Estimation of Multi-Factor Heath Jarrow Morton Term Structure Models (with A. Jeffrey, D. Kristensen, T. Nguyen, and P.C.B. Phillips) *Journal of Financial Econometrics* 2, 251-289.
- [3] Semiparametric Regression Analysis for Missing Response Data (with Q. Wang and W. Härdle) *Journal of the American Statistical Association* 99, 334-345.
- [4] Limit theorems for estimating the parameters of differentiated product demand systems (with S. Berry and A. Pakes). *Review of Economic Studies* 71, 613-654.
- [5] Testing forward exchange rate unbiasedness efficiently: A Semiparametric Approach (with D. Hodgson and K. Vorkink) *Journal of Applied Economics* 7, 1, 325-353
- [6] The LIVE Method for Generalized Additive Volatility Models (with W. Kim). *Econometric Theory* 20, 1094-1139.

2003

- [1] Estimating Multiplicative and Additive Hazard Functions by Kernel Methods (with J.P. Nielsen and S. van de Geer). *The Annals of Statistics* 31, 2, 464-492.
- [2] Is there Chaos in the World Economy? A Test Using Nonparametric Regression (with M. Shintani). *International Economic Review* 44, 331-357
- [3] Some higher order theory for a consistent nonparametric model specification test. (with Y. Fan) *The Journal of Statistical Planning and Inference* 109, 1-2, 125-154
- [4] The shape of the risk premium: Evidence from a semiparametric-mean GARCH model (with B. Perron) *Journal of Business and Economic Statistics* 2003, 354-367.
- [5] Estimation of Semiparametric Models when the Criterion is not Smooth (with X. Chen and I. Van Keilegom) *Econometrica* 71, 1591-1608.
- [6] Nonparametric smoothing methods for a class of non-standard curve estimation problems (with E. Mammen) in *Recent Advances and Trends in Nonparametric Statistics* pp 203-216, Elsevier, Amsterdam
- [7] More Efficient Local Polynomial Estimation in Nonparametric Regression with Autocorrelated Errors (with Raymond J. Carroll, Enno Mammen, and Zhijie Xiao) *Journal of the American Statistical Association* 98, 980-992.
- [8] Accounting for Correlation in Marginal Longitudinal Nonparametric Regression (with R.J. Carroll, X. Lin, and E. Mammen) *Second Seattle Symposium on Biostatistics*, editor D. Lin.

2002

- [1] Nonparametric Estimation with Aggregated Data (with Yoon Whang) *Econometric Theory* 18, 420-468.
- [2] Edgeworth approximations for semiparametric instrumental variable estimator and test statistics. *Journal of Econometrics* 106, 325-368.
- [3] Nonparametric Censored and Truncated Regression (with A. Lewbel). *Econometrica* 70, 765-780.
- [4] A Nonparametric Prewhitened Covariance Estimator (with Z. Xiao) *Journal of Time Series Analysis* 23, 215-250.
- [5] Testing the CAPM efficiently under elliptical symmetry: A Semiparametric Approach (with D. Hodgson and K. Vorkink). *Journal of Applied Econometrics* 17, 617-639

2001

- [1] Estimation of Linear Regression Models from Bid-Ask Data by a Spread-Tolerant Estimator *Annals of Economics and Finance* 2, 99-109.
- [2] Second order approximations for Adaptive estimators of regression model parameters (with Zhijie Xiao). *Econometric Theory* 17, 984-1024.

- [3] Symmetrizing and unitizing transformations for linear smoothing weights. *Computational Statistics* 16, 153-164.
- [4] Estimating the Yield Curve by Kernel Smoothing Methods (with J. Nielsen, C. Tangaard, and E. Mammen). *Journal of Econometrics* 105/1 185-223.
- [5] Nonparametric Factor Analysis for Residual Time Series (with J.R. Poo). *TEST* 10, 161-182.
- [6] The estimation of conditional densities (with X. Chen and P. Robinson) *The Journal of Statistical Planning and Inference Special Issue in Honor of George Roussas* pp 71-84.
- [7] A Nonparametric Test of Additivity in Generalized Nonparametric Regression with estimated parameters (with P. Gozalo). *Journal of Econometrics* 104, 1-48.
- [8] Estimating additive nonparametric models by partial Lq Norm: The Curse of Fractionality. *Econometric Theory* 17, 1037-1050.

2000

- [1] Adaptive testing in ARCH models (with D. Steigerwald). *Econometric Reviews* 19, 145-174.
- [2] Efficient estimation of generalized additive nonparametric regression models. *Econometric Theory* 16, 502-523.
- [3] Local nonlinear least squares estimation: Using parametric information nonparametrically (with P. Gozalo) *The Journal of Econometrics* (2000) 99, 63-106.

1999

- [1] The limiting behavior of kernel estimates of the Lyapunov exponent for stochastic time series (with Yoon Whang) (1999) *The Journal of Econometrics* 91, 1-42.
- [2] A computationally efficient oracle estimator for additive nonparametric regression with bootstrap confidence intervals. (with W. Kim and N. Hengartner) (1999) *The Journal of Computational and Graphical Statistics* 8, 278-297.
- [3] The existence and asymptotic properties of a backfitting projection algorithm under weak conditions. (with E. Mammen and J.P. Nielsen) *The Annals of Statistics* (1999) 27, 1443-1490.
- [4] A Simulation comparison between the Backfitting and Integration methods of estimating Separable Nonparametric Models (with W. Härdle and S. Sperlich). *TEST* 8, 419-458.

1998

- [1] Nonparametric regression (with W. Härdle), in Samuel Kotz (ed.), *Encyclopedia of Statistical Sciences, Update Volume 2*, (1998), 470-485.
- [2] An optimization interpretation of integration and backfitting estimators for separable nonparametric models (with J.P. Nielsen) *Journal of The Royal Statistical Society, Series B* (1998), 60, 217-22.

[3] A GARCH model of the implied volatility of the Swiss market index from Option prices. (with M. Sabbatini) (1998) *The International Journal of Forecasting* 14, 199-213.

[4] A semiparametric survival model with flexible covariate effect (with P.J. Bickel and J.P. Nielsen). (1998) *The Annals of Statistics* 26, 215-241.

1997

[1] An Asymptotic expansion in the GARCH(1,1) model. *Econometric Theory*, (1997) **13**, 558-581.

[2] Efficient estimation of additive nonparametric regression models. *Biometrika*, (1997), **84**, 469-474.

[3] An analysis of transformations for additive nonparametric regression (with R. Chen, N. Wang, and W. Härdle). *Journal of The American Statistical Association* (1997) **92**, 1512-1521.

1996

[1] Estimating additive regression models with known links (with W. Härdle). *Biometrika*, (1996), **83**, 529-540.

[2] Edgeworth approximation for MINPIN estimators in semiparametric regressions models *Econometric Theory* (1996) **12**, 30-60.

[3] Second order approximation in a linear regression with heteroskedasticity of unknown form *Econometric Reviews*, (1996), **15**, 1-32.

[4] Nonparametric estimation of additive separable regression (with R. Chen, W. Härdle, and E. Severance-Lossin). In *Statistical Theory and Computational Aspects of Smoothing* Physica Verlag, (1996), p247-265.

[5] Nonparametric regression estimation at design poles and zeros (with N. Hengartner). *The Canadian Journal of Statistics*, (1996), **24**, 583-591.

1995

[1] Second order approximation in a partially linear regression model, *Econometrica* (1995) **63**, 1079-1113.

[2] Kernel estimation in a nonparametric marker dependent hazard model (with J. P. Nielsen) *The Annals of Statistics*, (1995), **23**, 1735-1748.

[3] A kernel method of estimating structured nonparametric regression based on marginal integration (with J.P. Nielsen), *Biometrika* (1995), **82**, 93-100.

[4] A simple bias reduction method for density estimation (with M.C. Jones and J.P. Nielsen), *Biometrika* (1995), **82**, 327-338.

[5] Estimation in semiparametric models: A review, in P.C.B. Phillips and G.S. Maddala (eds.), *A Volume in Honor of C.R. Rao*, Blackwell. (1995)

1994

- [1] A multiplicative bias reduction method for nonparametric regression (with J.P. Nielsen), *Statistics and Probability Letters* (1994), **19**, 181-187.
- [2] Applied nonparametric methods (with W. Härdle), in D.F. McFadden and R.F. Engle (eds.), *The Handbook of Econometrics*, Volume IV, (1994) pp 2295-2339, North Holland.

1993

- [1] Adaptive estimation in ARCH models *Econometric Theory* (1993) **9**, 539-569.
- [2] On Ultrapoverty (with S. Anand and C.J. Harris), Harvard Center for Population and Development, No. 93.02.

PROBLEMS, COMMENTS, AND BOOK REVIEWS

- [1] Differentiation of the matrix exponential, *Econometric Theory*, Problem no. 94.3.2 (1994). Solution in 95 vol 11.
- [2] Review of Halbert White: Estimation, Inference and Specification Analysis, *Econometric Theory* 1996, 581-583.
- [3] Review of A. Ron Gallant: An Introduction to Econometric Theory, *Econometric Theory* 1998.
- [4] Kernel Regression with “no” information, *Econometric Theory*, Problem no 96.2.1. (1996).
- [5] Asymptotic inefficiency of an estimator derived from a Kernel-based test statistic, *Econometric Theory*, Problem no 97.1.2. (1997).
- [6] Minimum distance with the L1 norm. *Econometric Theory* 1998.
- [7] Review of J. Horowitz: Semiparametric Methods in Econometrics. *Journal of The American Statistical Association*
- [8] Interview of T.J. Rothenberg. *Econometric Theory*.
- [9] Review of A. Pagan and A. Ullah: Nonparametric Econometrics. *Journal of Statistical Planning and Inference*
- [10] An exact fitting estimator in linear regression. *Econometric Theory*, 2000
- [11] An Alternative GLS-like Transformation in Regression Models with AR(1) errors (with D. Kristensen.) *Econometric Theory*, 2003 19, 879-890.
- [12] Comment on “An Adaptive Estimation of Dimension Reduction Space” by Y. Xia, H.Tong, and W.K. Li. *Journal of The Royal Statistical Society, Series B*.
- [13] Standard Errors for the Target Variance Approach to Estimating GARCH models (with D. Kristensen.) *Econometric Theory* 2003, 19, 879-880.

REVISE AND RESUBMITS

- [1] An Alternative way of computing efficient semiparametric instrumental variables estimators (with X. Chen) *Journal of Econometrics*
- [2] Semiparametric Estimation of the Fama French Model (with G. Connor). *Journal of Empirical Finance*
- [3] Conditional independence Restrictions: Testing and Estimation (with P. Gozalo). *Econometric Reviews*
- [4] A Quantilogram approach to testing for Directional Predictability (with Y. Whang) *Journal of Econometrics*
- [5] Asymptotic Distributions for Local Polynomial Nonparametric Regression Estimators under weak dependence (with Z. Lu) *Econometric Theory*
- [6] A Nonparametric Regression Estimator that Adapts to Error Distribution of Unknown Form (with Z. Xiao) Submitted to *Econometric Theory*
- [7] Nonparametric Estimation of Homothetic and Homothetically Separable Functions (with A. Lewbel) *Econometrica*
- [8] A Smoothed Least Squares Estimator for The Threshold Regression Model (with M. Seo) *Journal of Econometrics*

WORKING PAPERS AND PAPERS UNDER REVIEW

- [1] Are There Monday Effects in Stock Markets? A Stochastic Dominance Approach (with Y. Cho and Y. Whang)
- [2] Estimating Features of a Distribution from Binomial Data (with A. Lewbel and D. McFadden)
- [3] Estimation of Bivariate Poisson Mixture Models by Kernel Methods
- [4] Computationally and Statistically Efficient Single Index Estimation (with Y. Xia and W. Härdle).
- [5] Estimation of a Semiparametric Transformation Model by Minimum Distance (with S. Sperlich and I. Van Keilegom)
- [6] Nonparametric Regression with Filtered Data (with J.P. Nielsen and E. Mammen)
- [7] Non-Parametric Estimation of Single Factor Heath Jarrow Morton Term Structure Models and a Test for Path Independence (with A. Jeffrey and T. Nguyen)
- [8] Multivariate Density Estimation using Dimensionality Reducing Model Information (with J. Nielsen, T. Buche-Larsen, and M. Guillen)
- [9] Identification and Nonparametric Estimation of a transformed Additively Separable Model (with D. Jacho-Chavez and A. Lewbel)

- [10] Estimation of a Semiparametric IGARCH Model (with W. Kim)
- [11] Nonparametric Transformation to White Noise (with E. Mammen)
- [12] An Optimal Estimator of True Mark under Double Blind Marking
- [13] Testing for Stochastic Dominance Efficiency (with T. Post and Y. Whang)
- [14] Kernel Estimation of Polarization Measures (with G. Anderson and Y. Whang)
- [15] Testing for Stochastic Monotonicity (with S. Lee and Y. Whang)
- [16] Higher-order Asymptotic Theory when a parameter is on the boundary with an application to GARCH Models (with E. Iglesias)
- [17] Efficient Semiparametric Estimation of the Fama-French Model (with G. Connor and M. Haggmann)

BOOK MANUSCRIPTS

- [1] Nonlinear Methods for Applied Microeconometrics (with A. Pakes)
- [2] An Advanced Introduction to Probability and Statistics for Econometricians.
- [3] Financial Econometrics (Under contract with Blackwells)
- [4] Smoothing Methods in Finance (with W. Härdle)